

## SEMICONDUCTOR INTEGRATED CIRCUIT

Patent Number: JP4199726  
Publication date: 1992-07-20  
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Requested Patent: ☐ JP4199726  
Application Number: JP19900332847 19901129  
Priority Number(s):  
IPC Classification: H01L21/66; G11C11/401; G11C11/413; G11C17/00  
EC Classification:  
Equivalents: JP2937471B2

### Abstract

**PURPOSE:** To allow operation diagnosis without damaging an electrode pad by a method wherein it is made possible that the diagnosis starting instruction is given from outside and the diagnosis results is fed to outside, with non-contacting state by means of an interface section contained in a diagnosis circuit.

**CONSTITUTION:** A plurality of a circuit to be diagnosed 3A and a circuit for diagnosis 3B that allows this operational diagnosis of the circuit to be diagnosed 3A are formed on the same wafer. A circuit for diagnosis 3B is formed, including a memory section 5 storing the information for diagnosis, a logic circuit section that makes evaluation of acceptance or rejection by comparing the output result from the circuit to be diagnosed 3A with its expected value when the information for diagnosis is given to the circuit to be diagnosed 3A, and an interface section 90 that allows the taking in of the diagnosis start instruction signal from outside and the output of the diagnosis results to outside with non-contacting state with respect to the wafer 1, thereby making it possible to perform operational diagnosis without damaging an electrode pad such as bonding pad.

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